

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : Michael J. Sullivan
FOR : **IMPROVED MULTI-LAYER GOLF BALL**
SERIAL NO. : 09/121,628
FILED : July 23, 1998
EXAMINER : D. Buttner
GROUP ART UNIT : 1713
LAST OFFICE ACTION : February 7, 2000
ATTORNEY DOCKET NO. : P3724-F2-C1
(SLD 2 0035-1-1-1(I))

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Cleveland, Ohio 44114-2518
November 9, 2000

APPEAL BRIEF UNDER 37 C.F.R. 1.192

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Appellant files herewith an Appeal Brief (in triplicate) in connection with the above-identified application, wherein claims 1-8 and 12-16 were finally rejected in the Office Action of February 7, 2000.

CERTIFICATE OF MAILING

I hereby certify that this **APPEAL BRIEF OF APPLICANT** is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on

11/9/00

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I. REAL PARTY IN INTEREST (37 C.F.R. § 1.192(c)(1))

The real parties in interest in this appeal are the inventor, Michael J. Sullivan, and his assignee, Spalding Sports Worldwide, Inc.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 1.192(c)(2))

There are no other appeals and/or interferences that will directly affect, or will be directly affected by, or will have a bearing on the Board's decision in this appeal.

However, Appellant wishes to remind the Board that application Serial No. 08/815,556, filed March 12, 1997, is also currently under appeal. As explained in greater detail herein, the Examiner issued a provisional obviousness-type double patenting rejection and a double patenting rejection under § 101 of claims in the present application based upon claims in the '556 application. The '556 application is a parent application to the present application. That is, the present application is a continuation of the '556 application.

III. STATUS OF CLAIMS (37 C.F.R. § 1.192(c)(3))

The status of the claims set forth after the Final Office Action mailed February 7, 2000 was, and is, as follows:

Allowed claims: none

Rejected claims: 1-8 and 12-16.

The present appeal is directed specifically to claims 1-8 and 12-16.

IV. STATUS OF THE AMENDMENTS (37 C.F.R. § 1.192(c)(4))

The following rejections/objections were noted by the Examiner in the Final Office Action of February 7, 2000:

The Examiner expressed concerns over previously submitted evidence concerning the commercial success of Spalding's Strata™ golf balls.

Claims 1-8 and 12-16 were provisionally rejected under 35 U.S.C. § 101.

Claims 1-8 and 12-16 were also provisionally rejected for obviousness-type double patenting.

Claims 1-5, 13, 14, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,431,193 to Nesbitt in view of U.S. Patent No. 5,222,739 to Horiuchi et al.

Claims 1-8 and 12-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '193 patent to Nesbitt in view of the '739 patent to Horiuchi et al., and U.S. Patent No. 4,884,814 to Sullivan.

On June 21, 2000, the Examiner issued an Advisory action stating that the previously presented amendments (submitted in Applicant's response to the February 7 Office Action) were not entered.

However, the Examiner stated that the response did overcome the rejection for double patenting of claims 1-8 and 13-16. Accordingly, the rejection under § 101 for claim 12 remains, in addition to obviousness-type double patenting of claims 1-8 and 12-16.

The Examiner also asserted that a terminal disclaimer was required in each cited application.

The Examiner additionally contended that the Strata ball was "still not completely identified."

And, the Examiner maintained the previous rejections under § 103(a).

V. SUMMARY OF INVENTION (37 C.F.R. § 1.192(c)(5))

The present invention provides a multi-layered golf ball comprising covers that have a hard inner layer and a relatively soft outer layer (Page 6, lines 7-19; Abstract). The improved multi-layer golf balls provide enhanced distance and durability properties, while at the same time offering the "feel" and spin characteristics associated with soft balata and balata-like covers known in the art (Page 6, line 20 - page 7, line 8; Abstract).

The pending claims recite, in part, a golf ball comprising (i) a core, (ii) an inner cover layer molded on the core, and (iii) an outer cover layer molded on the inner cover layer (Page 10, lines 18-19). The pending claims also recite specific materials or characteristics for each of the layers (Page 11, line 20 - page 46, line 26). The pending claims further recite that the outer cover layer is relatively soft (Page 24, lines 3-5). And, all claims recite that the outer cover layer comprises an ionomeric material (Page 24, line 7 - page 34, line 4). It will be appreciated that

although this feature may be recited differently in various claims, it is present in all pending claims.

Appellant previously submitted evidence of the significant commercial success of the commercial embodiment golf balls of the present invention. Although it is Appellant's position that such evidence is highly persuasive of the nonobviousness of the pending claims, the present appeal and Appellant's reasons in support of this appeal, are not based upon the previously submitted evidence of commercial success.

VI. ISSUES (37 C.F.R. § 1.192(c)(6))

A. Provisional Rejection of Claim 12 Under 35 U.S.C. § 101 Should Be Withdrawn

Claim 12 was provisionally rejected under 35 U.S.C. § 101 as claiming the same invention as claims 1-13 of copending Application Serial No. 08/815,556. The '556 application is currently under appeal.

Independent claim 12 of the present application was previously amended in Appellant's response to the February 7, 2000, Office Action by adding a recitation that the ionomeric outer cover layer exhibits a Shore D hardness of from about 20 to about 40. With this amendment, claim 12 of the present application would not be claiming the same invention as any of the claims in the pending '556 application.

However, the Examiner refused to enter that amendment on grounds that the "Shore D language is new issue." See Advisory Action mailed June 21, 2000.

The reason for the Examiner's refusal to enter the proposed amendment to claim 12 is unclear. Specific support for the amendment is found on page 25, lines 5-6 of the application.

Clearly, upon entry of that amendment, claim 12 would not be claiming the same invention as any claims in the '556 application.

B. Obviousness-Type Double Patenting Rejection of Claims 1-8 and 12-16 Should Be Withdrawn

Claims 1-8 and 12-16 were rejected for obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application Serial No. 08/815,556.

Appellant notes that Application Serial No. 08/815,556 is currently under appeal.

Appellant previously indicated that it will file a terminal disclaimer in either the present application or Application No. 08/815,556, whichever issues later.

The Board will appreciate that it would be improper to enter a terminal disclaimer in the first issuing case.

C. Rejection of Claims 1-5, 13, 14, and 16 Under 35 U.S.C. § 103(a) Should Be Withdrawn

Claims 1-5, 13, 14, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,431,193 to Nesbitt and U.S. Patent No. 5,222,739 to Horiuchi et al. In support of the rejection the Examiner contended:

Nesbitt discloses golf balls having a hard inner cover and a softer outer cover. The inner cover can be Surlyn 1605 and the outer cover can be Surlyn 1855 (col. 3 lines 28-30). The amount of acid in the inner cover ionomer is not limited. Surlyn 1605 has 15% acid (see Parnell col. 4, lines 65) which borders on applicant's acid range.

It is known that higher acid ionomers are superior in golf balls (see Horiuchi col. 1 line 56). It would have been obvious to use a slightly higher acid ionomer in the inner cover of Nesbitt's ball for the expected improvements.

Page 4 of February 7, 2000, Office Action.

Additionally, the Examiner asserted:

The Examiner relies on Horiuchi to teach the benefits of high acid ionomers. Higher stiffness and higher impact resilience (resulting in better flying performance) is achieved when using ionomer of 16-30% acid. These are precisely the characteristics called for by Nesbitt for his inner layer (col. 57-60). Nesbitt does not explicitly teach any acid level in his inner cover ionomer (although inherently 15% is used). One practicing Nesbitt's invention would select ionomers of high flexural modulus (i.e., stiffness) and coefficient of restitution (impact resilience). Ionomers of 16-30% acid meet the criteria.

Page 5 of February 7, 2000, Office Action.

Appellant submits that the combination of the '193 patent to Nesbitt and the '739 patent to Horiuchi et al. actually teach away from the subject matter of claims 1-5, 13, 14 and 16.

Claim 1 recites a golf ball comprising a core, an inner cover layer or mantel comprising a high acid ionomer that includes at least 16% by weight acid and an outer cover layer that comprises a soft polymeric ionomer material.

Appellant submits that the '739 patent to Horiuchi clearly teaches the use of ionomers having 16% to 30% by weight acid in a single outer cover layer. Specifically, the Horiuchi et al. patent teaches:

Thus, the present invention provides a golf ball which comprises a core and a cover covering the core

Col. 1, lines 36-38.

For example, a cover resin composition is formed into hemispherical half shells and a core is surrounded with two half shells, followed by pressure-molding at 130 to 170°C. for 1 to 5 minutes. Also, the cover composition may be injection-molded to cover the core. A thickness of the cover layer is generally 1.0 to 3.0 mm.

Col. 2, line 66 to col. 3, line 4.

The solid core was covered with the cover resin composition by an injection molding to obtain a two piece solid golf ball. The ball was then coated with a paint to obtain a golf ball having a diameter of 42.8 mm.

Col. 3, lines 33-36.

A designer looking to the teachings of the '739 patent to Horiuchi et al. would be motivated to utilize a single cover layer configuration. If someone did look to the '739 patent in designing a multi-layer cover golf ball, one would be motivated to use the high acid ionomer taught by Horiuchi in an outer cover layer. There is absolutely no teaching in the '739 patent to Horiuchi to suggest that the benefits described therein are applicable or transferable to an inner cover layer or mantel of a multi-layer golf ball. Specifically, there is no teaching in Horiuchi et al. to suggest that the benefits achieved utilizing the high acid ionomer as an outer cover are obtainable when the high acid ionomer is utilized as an inner cover layer in combination with an outer cover layer comprising a soft polymeric ionomer.

Additionally, following the teaching of the '193 patent to Nesbitt, one would be motivated to use a relatively low acid ionomer such as Surlyn 1605 in the inner cover layer. As correctly pointed out by the Examiner, Surlyn 1605 is an ionomer comprising 15% acid.

Therefore, there is no motivation, other than through prohibited hindsight reconstruction in view of the claimed invention, to combine the '193 patent and the '739 patent to arrive at the present invention. The '193 patent to Nesbitt teaches relatively low acid ionomers and would teach away from using high acid ionomers in an inner cover layer. The '739 patent to Horiuchi et al. discloses high acid ionomers in outer covers (of a single cover layer golf ball) and would additionally teach away from using high acid ionomers in an inner cover layer of a multi-layer golf ball.

Claims 2-5 and 14 are all dependent from independent claim 1 and so, contain all of the recitations of that claim. In addition, those claims further recite additional aspects that when taken in conjunction with the novel features called out in independent claim 1, are clearly distinguishable over the limited disclosures of the patents to Nesbitt and Horiuchi.

Similarly, independent claim 13 parallels independent claim 1 and additionally recites that the inner cover layer comprises an ionomeric resin that includes about 17% to about 25% of an alpha, beta-unsaturated carboxylic acid and has a modulus of from about 15,000 to about 70,000 psi. Claim 13 further recites that the outer cover layer has a modulus of about 1,000 to about 30,000 psi.

There is absolutely no teaching of the previously noted aspects called out in claims 1 and 13, and certainly no teaching of these aspects in combination with the additional features recited in claim 13. Furthermore, claim 16 depends from claim 13 and so, contains all of the recitations of that claim.

For at least these reasons, Appellant submits that the rejection of claims 1-5, 13, 14, and 16 should be withdrawn.

F. Rejection of Claims 1-8 and 12-16 Under 35 U.S.C. §103(a) Should be Withdrawn

The Examiner rejected claims 1-8 and 12-16 as being obvious over the previously discussed patents to Nesbitt and Horiuchi et al., in further view of U.S. Patent No. 4,884,814 to Sullivan et al.

The Examiner asserted in this regard:

Nesbitt does not suggest his outer cover layer as being a blend of hard and soft ionomer. Blends of hard and soft ionomer are known to provide a balance of distance, spin and durability not obtainable from using a single ionomer (see Sullivan col. 3, lines 38-64).

It would have been obvious to use a blend of hard and soft ionomer as Nesbitt's outer cover for the expected benefits.

Appellant submits that the '814 patent to Sullivan is not particularly relevant to the patentability of the pending claims. Claims 1-5, 13, 14, and 16 do not recite a blend of components in any cover layer. Clearly, the '814 patent is not relevant to the patentability of those claims.

Although claims 6-8, 12 and 15 recite an outer cover layer of a certain blend of materials, those claims are readily distinguishable from the '814 patent to Sullivan. The '814 patent is directed to golf balls having a single cover layer comprising a particular blend of ionomers. All pending claims including claims 6-8, 12, and 15, recite a multi-layer golf ball having an inner cover layer of a particular composition and an outer cover layer having another particular composition.

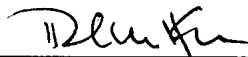
The '814 patent to Sullivan does not remedy the deficiencies of the previously discussed combination of the '193 patent to Nesbitt in view of the '739 patent to Horiuchi et al. For at least these reasons, Appellant respectfully submits that the present rejection be withdrawn.

VII. Conclusion

Appellant submits that the rejections set forth by the Examiner are improper. Reversal of all of the Examiner's rejections is respectfully requested.

Respectfully Submitted,

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VIII. APPENDIX OF CLAIMS

1. A golf ball comprising:

a core;

an inner cover layer molded on said core, the inner cover layer comprising a high acid ionomer including at least 16% by weight of alpha, beta-unsaturated carboxylic acid; and

an outer cover layer molded on said inner cover layer, said outer cover layer comprising a relatively soft polymeric low flexural modulus ionomer resin.

2. A golf ball according to claim 1 wherein the inner cover layer comprises a high acid ionomer resin comprising a copolymer of about 17% to about 25% by weight of an alpha, beta-unsaturated carboxylic acid.

3. A golf ball according to claim 1 wherein the inner cover layer comprises a high acid ionomer resin comprising a copolymer of about 18.5% to about 21.5% by weight of an alpha, beta-unsaturated carboxylic acid.

4. A golf ball according to claim 1, wherein the inner cover layer has a thickness of about 0.100 to about 0.010 inches and the outer cover layer has a thickness of about 0.010 to about 0.05 inches, the golf ball having an overall diameter of 1.680 inches or more.

5. A golf ball according to claim 1 wherein the inner cover layer has a thickness of about 0.0375 inches and the outer cover layer has a thickness of about 0.030 inches, the golf ball having an overall diameter of 1.680 inches or more.

6. A golf ball according to claim 1 wherein the outer layer comprises a low flexural modulus ionomer resin which includes a blend of a hard high modulus ionomer with a soft low modulus ionomer, the high modulus ionomer being a sodium, zinc, magnesium or lithium salt of a copolymer having from 2 to 8 carbon atoms and an unsaturated monocarboxylic acid having from 3 to 8 carbon atoms, the low modulus ionomer being a sodium or zinc salt of a terpolymer of an olefin having 2 to 8 carbon atoms, acrylic acid and an unsaturated monomer of the acrylate ester class having from 1 to 21 carbon atoms.

7. A golf ball according to claim 6 wherein the outer layer composition includes 90 to 10 percent by weight of the hard high modulus ionomer resin and about 10 to 90 percent by weight of the soft low modulus ionomer resin.

8. A golf ball according to claim 6 wherein the outer layer composition includes 75 to 25 percent by weight of the hard high modulus ionomer resin and about 25 to 75 percent by weight of the soft low modulus ionomer resin.

12. A multi-layer golf ball comprising:
a spherical core;
an inner cover layer molded over said spherical core, said inner cover layer comprising an ionomeric resin including at least 16% by weight of an alpha,

beta-unsaturated carboxylic acid having a modulus of from about 15,000 to about 70,000 psi;

an ionomeric outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball, the outer layer comprising a blend of i) a sodium or zinc salt of copolymer having from 2 to 8 carbon atoms and an unsaturated monocarboxylic acid having from 3 to 8 carbon atoms, and ii) a sodium or zinc salt of a terpolymer of an olefin having 2 to 8 carbon atoms, acrylic acid and an unsaturated monomer of the acrylate ester class having from 1 to 21 carbon atoms, said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.

13. A multi-layer golf ball comprising;

a spherical core;

an inner cover layer molded over said spherical core to form a spherical intermediate ball, said inner cover layer comprising an ionomeric resin including about 17% to about 25% by weight of an alpha, beta-unsaturated carboxylic acid and having a modulus of from about 15,000 to about 70,000 psi;

an outer cover layer molded over said spherical intermediate ball to form a multi-layer golf ball, the outer layer comprising an ionomeric material, said outer cover layer having a modulus in a range of about 1,000 to about 30,000 psi.

14. A golf ball according to claim 1 wherein said outer cover layer comprises a low acid ionomer having less than 16% by weight acid.

15. A golf ball according to claim 12 wherein said outer cover layer comprises a low acid ionomer having less than 16% by weight acid.

16. A golf ball according to claim 13 wherein said outer cover layer comprises a low acid ionomer having less than 16% by weight acid.